

Appl. No. 10/727,272
Reply to Office Action of May 11, 2006

Attorney Docket No. 2002-0945/24061.25
Customer No. 42717

REMARKS

Claims 2-13, 15-18, and 21-25 are currently pending in the application. Of these, Claims 21-25 currently stand withdrawn from examination on the merits. In view of the remarks that follow, Applicants respectfully request further and favorable consideration.

Election/Restriction Requirement

The Office Action asserts that it is setting forth an election-of-species requirement, where the species are defined as:

1. A method of manufacturing a semiconductor device having a gate structure and an interconnect layer, utilizing CMP.
2. A method of planarizing topographic features on a substrate using a rotatable polishing head.

However, this requirement is respectfully traversed, because it is not in proper form. In this regard, the current requirement is identical to the requirement that was set forth in the last Office Action, except that the Examiner has removed a parenthetical claim list from the definition of each so-called species. Therefore, as a practical matter, the present requirement continues to suffer from precisely the same defects as the requirement presented in the last Office Action. As before, Applicant's traverse is not directed to the issue of whether or not the so-called "species" are patentably distinct. Instead, Applicants are respectfully pointing out that the Office Action fails to properly identify any "species" upon which an election-of-species requirement can properly be based. MPEP §806.04(e) emphasizes with italics that:

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**Claims are definitions of inventions. *Claims are never species . . .*
*Species are always the specifically different embodiments.***

Although the Examiner states that parenthetical lists of claims have been removed from the requirement, the language identifying the so-called "species" still does nothing more than paraphrase language from Applicants' claims. In particular, the Office Action attempts to identify a first "species" by paraphrasing some language from one group of claims, and attempts to identify a second "species" by paraphrasing some language from a different group of claims. The present Office Action and the prior Office Action both assert that certain claims constitute one species, and other claims constitute another species. But this approach is specifically prohibited by MPEP §806.04, which emphasizes that "*Claims are never species*". It exalts form over substance to say that deleting the parenthetical claim lists will cure the defects in the prior requirement.

In lines 8-14 on page 2 of the present Office Action, the Examiner asserts that:

. . . the applicant should note that CMP and "polishing with a rotating head" are not the same process. . . . CMP is a specific process which uses a slurry containing a chemical and an abrasive along with a polishing head to effect the removal of material from a substrate surface. "Polishing with a rotating head" is akin to sanding a piece of wood with sandpaper.

In other words, the Examiner asserts that (1) CMP and (2) "polishing with a rotating head" constitute two different species disclosed by Applicants. However, the quoted phrase "polishing with a rotating head" does not appear anywhere in the originally-filed text of the present application, nor does it appear anywhere in Applicants' currently-pending claims. So in referring to "polishing with a rotating head", the Examiner is not quoting Applicants, nor is the Examiner

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clearly and accurately identifying any embodiment or "species" disclosed by Applicants in the present application. And since the Examiner is not quoting Applicants, what the Examiner is apparently quoting is his own prior effort to paraphrase the subject matter of Applicants' claims. And that is not a proper basis for any election-of-species requirement, because an election-of-species requirement must be directed to species actually disclosed by Applicants, rather than the subject matter of Applicants' claims.

In this regard, and as noted above, MPEP §806.04(e) emphasizes with italics that "*Claims are never species . . . Species are always the specifically different embodiments*". Consequently, in identifying the embodiments/species disclosed in a patent application, the claims should be ignored, and the focus should be on the rest of the application as filed. As to a method of planarization, the text and drawings of the present application disclose several embodiments or species, but they all involve CMP. More specifically, the attention of the Examiner is directed to paragraphs [0026] through [0032] of Applicants' originally-filed specification, where Applicants discuss several ways of planarizing using CMP. The differences between these planarization techniques involve variation of characteristics such as:

- 1) The downward force used during CMP, as discussed in paragraph [0026].
- 2) The polishing rate ratio used for CMP, as discussed in paragraph [0027].
- 3) The polishing head rotation speed used for CMP, as discussed in paragraph [0028].
- 4) The speed of platen rotation used for CMP, as discussed in paragraph [0029].
- 5) The selection of materials in the substrate being polished based on resistance to CMP, as discussed in paragraph [0030].
- 6) The chemical composition of the slurry used for CMP, as discussed in paragraph [0031].
- 7) The use of a cap layer in the substrate being polished by CMP, as discussed in paragraph [0032].

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In paragraphs [0037] to [0040], Applicants discuss a CMP machine that is capable of carrying out these different CMP techniques. Applicants' different planarization techniques could possibly be viewed as different embodiments (species). But it should be noted that all of these disclosed embodiments (species) involve the use of CMP. Contrary to the assertions in the Office Action, it is not clear that Applicants disclose even one embodiment (species) that does not involve any CMP. Consequently, to the extent the Office Action asserts that Applicants disclose not only an embodiment (species) that involves CMP, but also a further embodiment (species) that is patentably distinct from CMP, it is not clear to Applicants what specific disclosed embodiment is believed by the Examiner to use no CMP.

The PTO requires that Applicants reply to a restriction requirement or an election-of-species requirement, even if Applicants offer a valid traverse. As between the two groups set forth in the Office Action, it is not clear that the present application actually discloses any embodiment or species that properly falls within Group 2, and it is certainly not clear to Applicants what specific disclosed embodiment (or species) Applicants would be electing if they elected Group 2. Accordingly, Applicants elect Group 1 (a method that utilizes CMP), because Group 1 appears to Applicants to encompass all of the embodiments (species) that are disclosed in the present application. Claims 2-13 and 15-18 all read onto the so-called "species" of Group 1. Moreover, withdrawn Claims 21-25 all read onto one or more of the species in Group 1, and it is therefore respectfully submitted that Claims 21-25 should be examined on the merits.

Conclusion

In view of the foregoing, it is respectfully requested that the election/restriction requirement is defective and must be withdrawn, and that all of the pending claims should be examined on the merits. Further and favorable consideration of this application is respectfully requested. If the Examiner believes that examination of the present application may be advanced

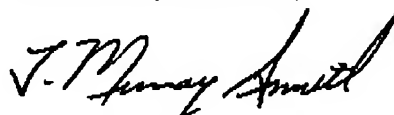
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in any way by a telephone conference, the Examiner is invited to telephone the undersigned attorney at 972-739-8647.

Although Applicants believe that no fee is due in association with the filing of this Response, the Commissioner is hereby authorized to charge any additional fee required by this paper, or to credit any overpayment, to Deposit Account No. 08-1394 of Haynes and Boone LLP.

Respectfully submitted,



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Enclosures: None

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